

Gold Investor

Risk management and capital preservation

Volume 6

In this edition:

- How gold improves alternative asset performance
- Gold: metal by design, currency by nature
- The most liquid of all 'liquid alts'

June 2014

About the World Gold Council

The World Gold Council is the market development organisation for the gold industry. Working within the investment, jewellery and technology sectors, as well as engaging with governments and central banks, our purpose is to provide industry leadership, whilst stimulating and sustaining demand for gold.

We develop gold-backed solutions, services and markets based on true market insight. As a result we create structural shifts in demand for gold across key market sectors.

We provide insights into international gold markets, helping people to better understand the wealth preservation qualities of gold and its role in meeting the social and environmental needs of society.

Based in the UK, with operations in India, the Far East, Europe and the US, the World Gold Council is an association whose members comprise the world's leading gold mining companies.

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Foreword



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Welcome to the sixth edition of *Gold Investor*. This issue contains three thought-provoking articles, and a common thread runs through them all: the balance between diversification and performance.

This is a highly relevant theme for two reasons. Firstly, our focus is on the value that gold can deliver to investors: gold has a well-recognised role in portfolio performance.¹ Secondly, we live in the shadow of the 2008-2009 financial crisis, with its harsh lessons on risk and how to use portfolio diversification to manage it.

In each article our analysts take a close look at a different asset class, examine its context and characteristics, and analyse how it compares to – and interacts with – gold.

Alternative assets can deliver outperformance but fare less well as diversifiers

First, in *How gold improves alternative-asset performance*, we scrutinised alternative assets – private equity, hedge funds, real estate, and commodities – to see if they deliver performance and diversification. We found good news, room for improvement and a few surprises.

The good news is that alternatives can deliver outperformance. Some investors may be surprised to find that gold returns outperformed some alternative assets and – an important diversification-and-performance point – has a correlation to equities that is lower than any alternative asset.

Gold is often labelled a commodity but it behaves more like a currency

In *Gold: metal by design, currency by nature* we make the case for gold as a distinct asset class rather than a commodity.

Many people find it odd that peas and courgettes (or zucchini in the US) are classified as fruits. Botany says that because they have seeds they must be fruits, but chefs use them as they would other vegetables. Our analysis shows that gold suffers from a similar kind of category confusion. It features in commodity indexes, but it responds to different economic factors (particularly those that drive currencies), is less volatile, and has a far lower correlation to the business cycle.

Gold can deliver on liquid alts' promise of liquidity, returns and diversification

Finally, we look at 'liquid alternatives' (or 'liquid alts') in *The most liquid of all 'liquid alts'*. Liquid alts offer investors a more liquid investment in alternative assets. They have grown dramatically since 2008 and are expected to keep rising: a Citigroup reports predicts that liquid-alt assets could reach US\$1.3 trillion by 2017.

However, when we compared liquid alts to gold we found two interesting results. Gold meets the key criteria of liquid alts as it is a non-traditional asset or strategy, is more liquid than alternative assets, and is a transparent investment. In addition, gold does not have the drawbacks – including limited liquidity and relatively high costs – that may put some investors off liquid alts.

We hope you find this edition of *Gold Investor* informative and stimulating. If you have comments or questions on any of the articles please get in touch at investmentresearch@gold.org.

¹ New Frontier Advisors and World Gold Council, *Gold as a strategic asset*, September 2006; New Frontier Advisors, *Gold as a strategic asset for European investors*, December 2011; Oxford Economics, *The impact of inflation and deflation in the case for gold*, July 2011; J.P. Morgan, *Gold in asset allocation*, July 2012; Mercer, *Gold as an asset class for institutional investors*, February 2011; Matos, P. and R. Evans, *Gold as a portfolio diversifier: the World Gold Council and investing in gold*, Darden Business Publishing, University of Virginia, September 2012.

I: How gold improves alternative asset performance

Investors look to alternative assets – private equity, hedge funds, real estate, and commodities – for returns and diversification. We ran the numbers and found good news, room for improvement, and a few surprises.

The good news is that alternatives can deliver outperformance. What may surprise some investors is that gold performs well – often better than alternatives. It delivers respectable risk-adjusted returns and has a lower correlation to equities than any other alternative.

We also found that even a modest gold holding helps reduce risk without sacrificing returns for portfolios that include alternatives.

Searching for return from uncorrelated sources: how demand for alternatives flourished

Demand for alternatives has grown substantially over the past decade...

Interest in alternative assets – anything other than a stock, bond, or money-market instrument – has significantly grown over the past decade. Investors have put money to work in private equity, hedge funds, real estate, and commodities for two main reasons. Firstly, they want positive risk-adjusted returns that beat stocks (using industry jargon, to find ‘alpha’). Secondly, they want these assets to better diversify portfolios and help mitigate risk (reduce their ‘beta’).

...and accelerated after the financial crisis.

The fallout from the 2008-2009 crisis has further fuelled the growth of alternatives. The aggressive monetary policies implemented by central banks to reactivate economic growth have pushed down interest rates to historically low levels. This has prompted investors to look for additional sources of return. At the same time, the financial crisis also created greater awareness of risk and highlighted the importance of appropriate diversification.

In addition, some alternative strategies have become available to a larger set of investors. Hedge funds are now able to advertise publically as a result of the implementation of the 2012 Jumpstart Our Business Startups Act (aimed to spur capital-raising and job growth).¹ Investment firms have also developed liquid alts – alternative assets typically offered via a mutual fund or exchange-traded fund. Liquid alts give investors a way to overcome alternatives’ low liquidity and poor transparency (see *The most liquid of all ‘liquid alts’* for more detail on how gold fits into the liquid-alt story).

¹ Securities and Exchange Commission: <http://www.sec.gov/spotlight/jobs-act.shtml>.

In response, assets under management (AUM) of global private equity funds have grown from less than US\$400 billion in 2001 to more than US\$3.5 trillion by 2013.² The notional outstanding in commodity futures, forwards and swaps has grown from US\$260 billion to US\$1.5 trillion over the same period.³ Similarly, the largest hedge funds (and funds of funds) collectively hold US\$2.9 trillion in AUM, having more than quadrupled in size since 2000.⁴ Lastly, liquid alts have tripled since 2009, and a Citigroup survey suggests they will reach US\$1.3 trillion by 2017.⁵

We explore both the benefits that alternative assets can bring and the ways that investors can use gold to improve their alternative-asset strategies.

Alternatives are grouped into a single family but offer different benefits

Alternatives encompass many assets, and all aim to improve risk-adjusted returns...

A key principle of modern asset allocation is that, over time, a well-balanced portfolio increases risk-adjusted returns. In the past, investors relied on a combination of 'traditional' assets (typically stocks, bonds and cash) to diversify their portfolios. However, these basic allocation strategies did not always lead to the most effective mix of assets.

Today, alternative assets provide investors with a wider set of options. While it is easy to call something an alternative, the category is very broad. It includes multiple asset sub-types and investment strategies that often have little in common – from hedge funds and private equity to real estate and commodities (including all their related variants).

This range of assets and strategies gives investors several potential ways to diversify their portfolios and mitigate risk. For example:

- Hedge funds give investors access to sophisticated expertise along with a wide range of assets and investment tactics. They can allow asset managers to outperform a given benchmark without increasing risk.⁶
- Private equity can help an investor diversify a portfolio and get access to the profits of business deals and long-term development projects that are not available through public markets.⁷
- Commodities, gold and real estate investments can give investors exposure to underlying economic growth and demand for scarce assets.

2 Prequin, *The 2014 Prequin global private equity report*.

3 Bank for International Settlements and World Federation of Exchanges.

4 Evestment, *Global hedge fund asset flows report*, April 2014.

5 Barron's, *Goldman on liquid alts: like the go-go days of ETFs*, December 2013: <http://blogs.barrons.com/focusonfunds/2013/12/06/goldman-on-liquid-alts-like-the-go-go-days-of-etfs/>; and Citigroup and Citi Prime Finance, *The rise of liquid alternatives and the changing dynamics of alternative product manufacturing and distribution*, May 2013.

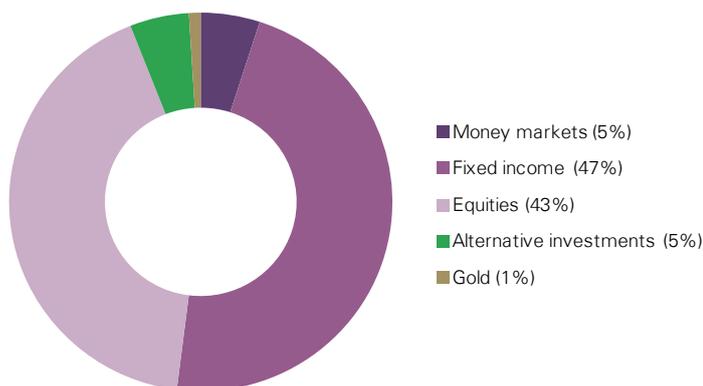
6 Hedge funds are private investment partnerships that are open to a limited number of qualified or accredited investors (as defined by a country's financial regulatory body) who can meet investment minimums. Many investors associate hedge funds with sophisticated and complex strategies because they employ leverage, take short and long positions and use derivatives in order to precisely express their markets views. They offer investors the potential for absolute returns with the expectation that their strategies are superior to long-only holdings of traditional assets in a portfolio. There are many types of hedge funds, but they generally fall into four main categories: equity funds, event-driven funds, macro funds and relative-value funds. In addition, a fund of hedge funds (FoHF) is an alternative way to access hedge funds. A FoHF is an investment vehicle whose portfolio consists of holdings in a number of different hedge funds.

7 Private equity is a broad term that describes capital invested in private companies that are not listed on public exchanges. Private equity funds are vehicles that allow investors to participate in the growth of non exchange-traded companies. There are many sub-strategies within private equity space, but some of the most popular ones include venture capital (VC) and leveraged buyouts (LBOs). Investors access private equity through a similar legal structure as hedge funds, whereby limited partners combine funds while general partners deploy the pool of capital. However, investors seeking to gain the benefits of high and uncorrelated returns with private equity investments have to sacrifice transparency and be willing to hold illiquid securities in potentially highly leveraged vehicles. For example, many private equity funds (as well as hedge funds) have lock-up periods of anywhere between one to seven years, forcing investors to sell their limited partnership interests into an illiquid market if there's an urgent need for cash.

...but investors have only started to fully embrace them.

Not all investors have been able to take advantage of alternatives. Retail investors had no access to alternates before liquid alts or the recent relaxation of hedge fund advertisement rules – and some of these assets do not cover the full active-management smorgasbord of alternative strategies. In addition, some institutional mandates, particularly those of some pension funds, allow investments only in traditional assets. The result is that only an estimated 5% of financial assets are in alternative investments, with less than 1% in gold (**Chart 1**).

Chart 1: Only 5% of US\$153 trillion financial assets are currently in alternatives



Percentages do not add to 100% due to rounding. Additional reference notes are listed at the end of this article.
Source: Bank for International Settlements, Hedge Fund Research, Cambridge Associates, GFMS, Thomson Reuters, World Federation of Exchanges, World Gold Council

The pros and cons of alternatives; returns and diversification

Investors who commit funds to alternatives look for two things: additional returns, and diversification. When we analyse how alternative assets deliver against these criteria, we find mixed results.

Alternatives have generally outperformed stocks on a risk-adjusted basis...

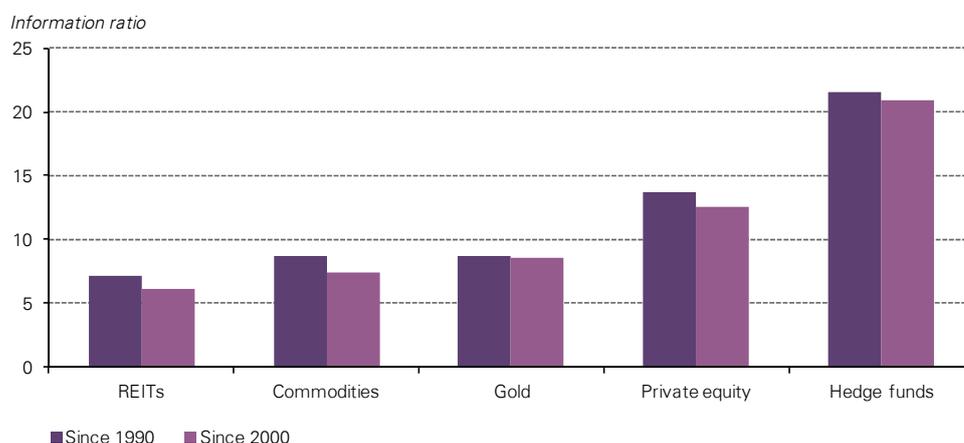
Relative returns: alternatives offer good value for the money

We find that alternatives have generally given investors better bang for the buck relative to stocks (**Chart 2**). While much of the available data (typically indices that act as proxies for private-equity and hedge funds) tends to overestimate returns,⁸ respected academic researchers have found evidence of outperformance. For example, Harrison, Jenkins and Kaplan show that buyout funds have produced an excess annual return of 3% against the S&P 500 since 1990, while venture capital funds outperformed during the 1990s but have underperformed since 2000.⁹

Before we move on to our analysis of alternatives as a diversification tool, it is worth noting a relevant fact about gold: it has not only outperformed stocks, but also REITs and commodities on average since 1990 – and even more so since 2000.

Chart 2: Alternatives have generally provided better risk-adjusted returns than US stocks

Information ratio defined as the annualised return in excess of the MSCI US total return index divided by the corresponding volatility



Reference notes are listed at the end of this article.

Source: Bloomberg, Cambridge Associates, Dow Jones, HFR, The London Gold Market Fixing Ltd, World Gold Council

8 Some of the most commonly used benchmarks either do not give a full representation of the data or suffer from self-reporting and survival bias. For example, The Hedge Fund Research Fund-Weighted Composite Index (HFRI) is a commonly used global, equal-weighted index of over 2,000 single-manager funds that report to Hedge Fund Research database. Constituent funds report monthly net of all fees performance in US dollars and have a minimum of US\$50 million under management or a 12 month track record of active performance. Total AUM of HFRI constituents represents about a third of the estimated total size of the hedge fund universe. Similarly, the Cambridge Associates Private Equity Index is an end-to-end calculation based on data compiled from 1,125 U.S. private equity funds (buyout, growth equity, private equity energy and mezzanine funds), including fully liquidated partnerships, formed between 1986 and 2013. It is based on financial statements and narratives as the primary source of information concerning cash flows and ending residual/net asset values (NAV) for both partnerships and portfolio company investments. Kaplan and Schoar (*Private equity performance: returns, persistence and capital flows*, The Journal of Finance, Vol. LX, No. 4, August 2005) suggest that private equity performance data has been found to suffer from a survival bias in which reporting is voluntary, leading to exaggerated returns that are not representative of industry averages. Additionally, successful funds tend to continue outperforming while under-performers continue to lag.

9 Harris, Jenkins and Kaplan, *Private equity performance: what do we know?*, July 2013. To appear in The Journal of Finance.

...but not all offer the diversification that investors seek. This is where gold really stands out.

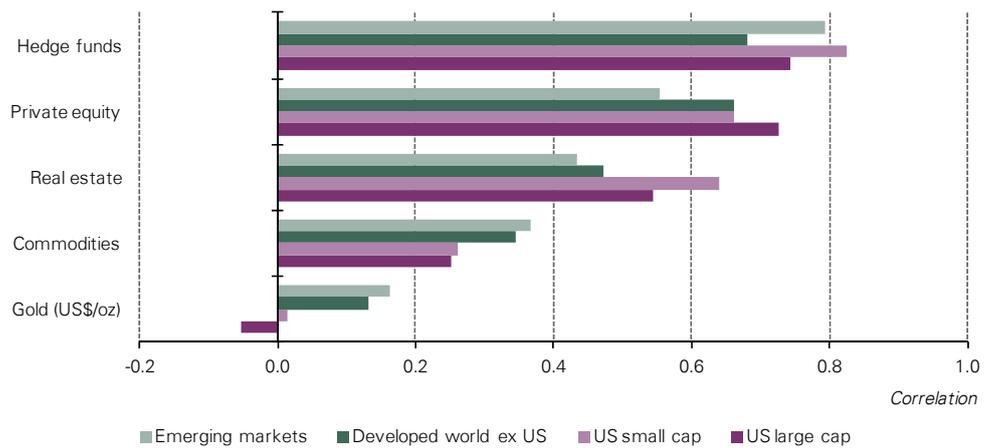
Diversification: most alternatives significantly correlate to stocks

When it comes to diversification and risk reduction, the picture is not as positive for many alternatives. Hedge funds, private equity funds and real estate can be highly correlated to stocks (**Chart 3**). Even commodities, with lower average correlations than the others, are still influenced by the economic cycle (see *Gold: metal by design, currency by nature*).

Gold stands out for its low correlations both to US and international stocks.

Chart 3: Hedge funds, private equity funds and REITs have high correlations to stocks

Correlations based on monthly returns (quarterly for private equity due to data availability) between January 1990 and March 2014



Reference notes are listed at the end of this article.

Source: Bloomberg, World Gold Council

Gold's role in alternative-investment strategies

We have carried out extensive original research that shows that gold is a valuable part of an alternative-asset portfolio strategy (see our 40-page report *Gold: alternative investment, foundation asset*).¹⁰

This section sets out relevant highlights from that research:

- How gold can overcome specific alternative-investment portfolio issues (gold adds liquidity and reduces credit and counter-party risks)
- Optimal gold holdings for portfolios that include alternative assets

Please note that the next section, *A recap of gold's portfolio attributes*, describes the factors that make gold a valuable part of any portfolio. We emphasise that the ideas we draw on in this article are not ours alone. Well-respected organisations that have arrived at the same conclusion include New Frontier Advisors, Oxford Economics, J.P. Morgan, Mercer, and The University of Virginia Darden School of Business, among others.¹¹

Gold adds liquidity to an alternative-asset strategy

Alternative investments' higher returns come with liquidity constraints that can restrict investors' access to funds during times of crisis or when other attractive opportunities present themselves.¹² If gold is part of an investor's alternate-asset strategy it can help fund liabilities during periods of systemic risk. We discuss this subject at length in *The most liquid of all 'liquid alts'*.

Gold is remarkably liquid. Investors can access it through exchange-traded funds (ETFs), exchange-traded derivative contracts and over-the-counter vehicles. Gold-backed ETFs collectively trade US\$1 billion a day, rivalling single stocks and many equity-linked ETFs. Futures in COMEX alone trade a daily average of US\$18 billion.¹³ What really stands out, though, is the over-the-counter (OTC) market. We estimate that, during 2013, gold contracts traded between US\$60 billion and US\$160 billion a day – most of them in the form of spot contracts. Further, during 2011 when liquidity was particularly high, daily volumes surpassed US\$240bn, according to the London Bullion Market Association.¹⁴ In other words, gold's liquidity in the OTC market rivals major currency pairs and surpasses all US stocks combined.

Gold helps reduce credit and counterparty risks

Hedge funds and private-equity funds use a range of credit and debt instruments and carry consequent credit risk (the risk that a borrower will default on a debt). Commodities and real-estate investments tend not to be subject to credit risk in the same way but may still be subject to counterparty risk (the risk that a party in a transaction fails to meet the terms of the financial contract).

Given that gold is easily accessible in physically-backed securities and contracts, investors not only remove credit risk but can also minimise counterparty risk. For example, investors can take delivery of gold, keep it in allocated accounts, or hold ETFs that are backed by physical gold.

Gold can provide liquidity when other markets dry up...

...and it doesn't carry credit risk and often carries no counterparty risk.

10 World Gold Council, *Gold: alternative investment, foundation asset*, October 2011.

11 New Frontier Advisors and World Gold Council, *Gold as a strategic asset*, September 2006; New Frontier Advisors, *Gold as a strategic asset for European investors*, December 2011; Oxford Economics, *The impact of inflation and deflation in the case for gold*, July 2011; J.P. Morgan, *Gold in asset allocation*, July 2012; Mercer, *Gold as an asset class for institutional investors*, February 2011; Matos, P. and R. Evans, *Gold as a portfolio diversifier: the World Gold Council and investing in gold*, Darden Business Publishing, University of Virginia, September 2012.

12 For example, private equity, hedge funds and other private investment vehicles are subject to lock-up periods, redemption notices and gating clauses. Lock-up periods refer to the initial period in which investors are not allowed to withdraw funds and can range from three months to three years. Redemption notices stipulate that investors need to let managers know they are planning to redeem funds in advance (typically three months). Finally, gating clauses give managers discretion to restrict withdrawals on otherwise permissible periods.

13 Volumes for ETFs, stocks and futures contracts based on 1-year averages ending March 2013.

14 London Bullion Market Association, *LBMA gold turnover survey for Q1 2011*, The Alchemist, August 2011.

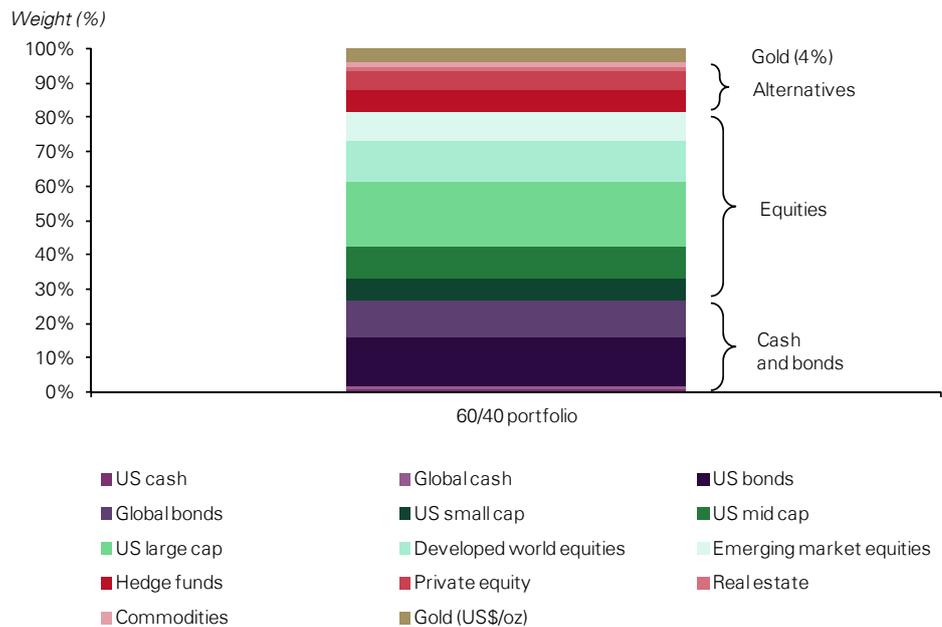
Having as little as 4% in gold in a well-balanced portfolio, alongside other alternatives, can effectively reduce risk without eroding returns.

Optimal gold holdings for portfolios that include alternative assets

As we have shown in previous research studies, whether investors are based in the US, the UK, continental Europe or Japan, adding 2%-10% in gold provides benefits that may not be easily replicated by a combination of traditional assets and commodities.¹⁵

In particular, our research shows that a 5%-6% allocation to gold is 'optimal' for investors with a well-balanced medium-risk portfolio (a 60/40 portfolio in equities, cash and bonds).¹⁶ When a portfolio also includes real estate, private equity and hedge funds, the optimal allocation for gold is closer to 4% in a medium risk portfolio (Chart 4).

Chart 4: An allocation of 4% to gold for diversified portfolios that include alternatives can improve risk-adjusted returns and reduce losses during periods of systemic risk



Reference notes are listed at the end of this article.

Source: World Gold Council

15 World Gold Council, *Why invest in gold?* Gold Investor, Volume 4, October 2013. Gold's appeal is not restricted to US dollar-based investors. Research shows that euro, yen and pound sterling investors have historically obtained similar results. See New Frontier Advisors, *Gold as a strategic asset for European investors*, December 2011; World Gold Council; *Gold as a strategic asset for UK investors*, July 2012; World Gold Council, *The role of gold in portfolio risk management for Japanese investors*, November 2013.

16 To find the mix that delivers the best possible returns for a given level of risk (in this case, measured by volatility), we use the Resampled Efficiency (RE) optimisation developed by Richard Michaud and Robert Michaud and described in *Efficiency Asset Management: a practical guide to stock and portfolio optimisation and asset allocation*, 2008, 2nd edition, Oxford Press, New York.

A recap on gold's portfolio attributes

In the previous section we highlighted the attributes of gold that are particularly relevant to alternative-asset strategies: exceptional liquidity along with lower credit and counter-party risk.

We believe these particular benefits to holding gold apply to all portfolio types, and this section is a broader recap of gold's portfolio benefits (see *Why invest in gold?* for more detail).¹⁷

Gold's price appreciation is the cherry on top. Its key role is in diversifying a portfolio and reducing risk.

Gold's benefits are not solely driven by its price

Even under the assumption that gold's annual return in nominal terms is a modest 2%-4% over the long run – lower than its historical return and akin to the global rate of inflation (**Table 1**) – gold's benefits mean that including gold can improve overall portfolio performance. The key lies in gold's ability to:

- Diversify a portfolio and consequently lower portfolio volatility
- Reduce losses in periods of financial turmoil
- Preserve purchasing power through its ready liquidity.

Table 1: Gold has outpaced inflation in the US and abroad, as well as short-term rates

Annualised average monthly returns

	Nominal gold return	Real gold return		Gold return in excess of:	
		using US inflation	using global inflation	US cash	global cash
Average since 1971	10.37%	4.19%	5.96%	5.13%	na
25-year average	5.24%	2.56%	1.58%	0.99%	0.09%
10-year average	14.43%	11.94%	12.10%	12.06%	11.04%

Reference notes are listed at the end of this article.

Source: Bureau of Labor Statistics, The London Gold Market Fixing Limited, World Gold Council

Gold is uncorrelated and protects capital during a crisis.

A flexible way to manage portfolio risk

Gold can help investors manage portfolio risk. The key is the way that gold interacts with other assets. Two factors are particularly important:

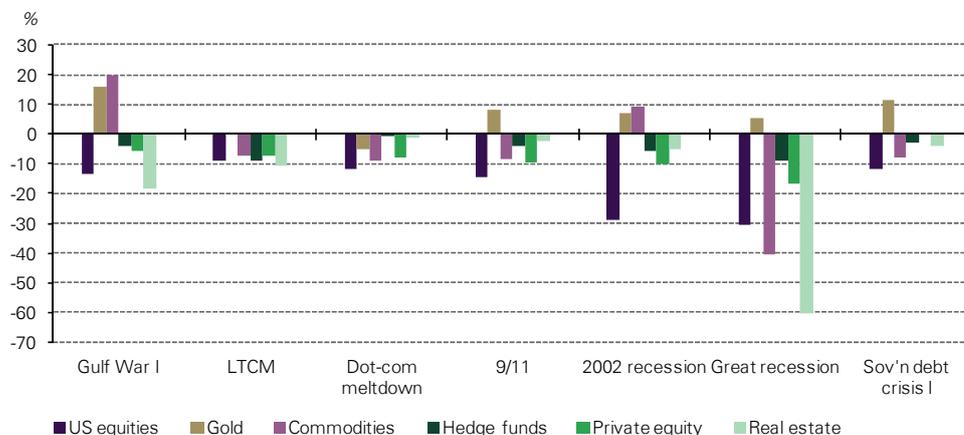
- **Low correlation with equities.** **Chart 3** (found in subsection *Diversification: most alternatives significantly correlate to stocks*) shows that gold has low correlations – lower than that of assets that are often seen as 'diversifiers' – to stocks over long periods of time.
- **Outperformance during crises.** Gold tends to outperform other assets in periods of economic and financial turmoil (**Chart 5**). This gives investors a way to reduce risk when it is most needed.¹⁸

¹⁷ World Gold Council, *Why invest in gold?* Gold Investor, Volume 4, October 2013.

¹⁸ See World Gold Council, *Tail-risk hedging: an international perspective*, Gold Investor, Volume 1, January 2013; and World Gold Council, *Gold: alternative investment, foundation asset*, October 2011.

Chart 5: Gold has consistently outperformed stocks as well as other alternatives during tail-risk events

Returns during periods of systemic risk



Reference notes are listed at the end of this article.

Source: Bloomberg, World Gold Council

Gold is driven by a diverse set of uses, users and producers around the world.

Gold's unique supply-and-demand factors lower volatility and deliver returns

- The drivers of demand for gold work at all stages of the business cycle. Gold's unique demand and supply dynamics ensure its role as a true diversifier for investors. Gold demand is distributed between jewellery (49%), investment (34%), technology (10%) and central banks (8%).¹⁹ Broadly speaking, economic growth spurs demand for gold in the form of jewellery and technology, but in recessions investors tend to buy gold as a store of value. This creates the balanced demand that accounts for gold's lack of correlation to other assets.
- **Gold demand is widely distributed.** Demand from Asia (57%) and the Middle East (10%) reduces the usual commodity demand dominated by developed countries and influenced by their business cycles.²⁰ A balance between East and West allows different sectors of gold demand to flourish when conditions are unfavourable in other sectors or regions.
- **Gold supply is widely distributed.** On the supply side, mine production accounts for approximately 65%, leaving another 35% to recycling. Given that gold mine production is spread around the globe, gold's price performance tends to be less subject to geopolitical and other idiosyncratic risks (see *Gold: metal by design, currency by nature*). Further, recycled gold constantly re-enters the market, providing a balancing factor that can further absorb shocks to the supply chain.

19 Five-year average demand ending in 2013 based on estimates by GFMS, Thompson Reuters. Investment includes bars, coins as well as exchange-traded and similar products.

20 Five-year average demand ending in 2013 based on estimates by GFMS, Thompson Reuters. It includes jewellery, technology, bars, coins, and ETF demand. It excludes over-the-counter transactions and central bank purchases.

References

Chart 1: Only 5% of US\$153 trillion financial assets are currently in alternatives

The chart values are as of December 2013. Estimates include the global market capitalisation of all publicly traded stocks and REITs, the total value of outstanding bonds and money market instruments, total open interest on major commodity futures plus above ground stocks of precious metals, the assets under management of private equity and hedge funds and private holdings of gold bullion. Central bank holdings of gold and bonds were excluded.

Chart 2: Alternatives have generally provided better risk-adjusted returns than US stocks

Information ratio defined as the annualised return in excess of the MSCI US total return index divided by the corresponding volatility. HFRI used as a proxy for hedge funds. Cambridge Associate index represents private equity. US REITs stand for real estate, S&P Goldman Sachs Commodity Index for commodities and London PM fix for gold. All returns based in US dollars.

Chart 3: Hedge funds, private equity funds and REITs have high correlations to stocks

Correlations based on monthly returns (quarterly for private equity due to data availability) between January 1990 and March 2014. US equity indices include MSCI US, Russell small cap, Russell mid cap, MSCI EAFE and MSCI emerging markets. HFRI used as a proxy for hedge funds. Cambridge Associate index represents private equity. US REITs stand for real estate, S&P Goldman Sachs Commodity Index for commodities and London PM fix for gold. All returns based in US dollars.

Chart 4: An allocation of 4% to gold for diversified portfolios that include alternatives can improve risk-adjusted returns and reduce losses during periods of systemic risk

These results display the optimal portfolios that were found for the *Gold: alternative investment, foundation asset* report published by the World Gold Council in October 2011.

Table 1: Gold has outpaced inflation in the US and abroad, as well as short-term rates

Shows the annualised average monthly returns for gold between 1972 and 2013 adjusted by: 1) US CPI; 2) OECD global inflation; 3) 3-month T-bill; 4) 3-month global cash index.

Chart 5: Gold has consistently outperformed stocks as well as other alternatives during tail-risk events

Returns during periods of systemic risk. For equities: MSCI US. HFRI used as a proxy for hedge funds. Cambridge Associates index represents private equity. US REITs stand for real estate, S&P Goldman Sachs Commodity Index for commodities and London PM fix for gold. All returns based in US dollars. Persian Gulf War I: Q3 1990, LTCM: Q3 1998, Dot-com meltdown: Q1 2001, 9/11: Q3 2001, 2002 recession: Q2/Q3 2002, US Credit Crisis: Q4 2008/Q1 2009, European sovereign debt crisis: Q2 2010.

II: Gold: metal by design, currency by nature

We have taken a close look at commodities, including their rather bleak recent past, and have arrived at two key thoughts. Firstly, we believe that commodities are a valuable portfolio-performance tool. Secondly, we have found good reasons why investors should treat gold as an asset class of its own.

Our analysis shows that gold does not fit neatly into the commodities category. It responds to several factors that drive currencies, and it has a much lower correlation to the business cycle than the rest of the commodities complex.

This is good news for investors looking for optimal portfolio performance.

Poor performance may not spell the end of commodities

Commodities have suffered over the recent past and are out of favour with many investors...

Commodities have taken a beating over the past 18 months, but the rout has lasted longer than that: commodities have underperformed equities and bonds since 2009. In 2013, investors withdrew US\$50bn from passive commodity-index funds,¹ the end result of poor performance, a slowdown in China, and tighter regulation of commodities trading. A recent survey by Barclays put commodities in general and base metals in particular at the bottom of the pile of near-term performance prospects.²

Commodities are also volatile. So far this year a number of events have highlighted the uncertain nature of investing in commodities. In January, Indonesia's ban on nickel-ore exports triggered a 50% rise in price to May. In the first quarter of 2014, approximately 40% of global platinum production came under threat by striking miners in South Africa.³ Elsewhere, cocoa has been affected by political events in the Ivory Coast, the largest producer, and severe droughts in Brazil have had a material impact on coffee prices. Volatility is a boon for speculators but presents a real problem for firms involved in the physical supply or consumption of the resource.

...but there are signs that the rout may be drawing to a close.

But not all commentators are despondent. Among the optimists, investment bank Goldman Sachs argues that commodity performance has played to expectations given the stage of the business cycle and that the commodity complex is now poised to benefit from a global economic recovery. And some fund managers who are concerned about the outlook for equities (a view we detailed in *Can gold replace bonds in balancing equity risk?*⁴) are actively considering redeploying commodities as a portfolio diversifier.

To us, the commodity story serves as context. It is useful to understand the commodity complex because there are some similarities between its constituents and gold. It is also useful to understand the portfolio benefits of commodities and their impact on inflation. However, what we highlight in this paper is how distinct gold is from the group, why this is the case, and what the implications are for investors.

1 FT.com, *Investors starting to look at commodities again*, 14 April 2014.

2 Barclays, *Global Macro Survey*, 18 March 2014.

3 Reuters, *Platinum firm Lonmin says 'bleeding' from South Africa strike*, 19 May 2014.

4 World Gold Council, *Can gold replace bonds in balancing equity risk?*, Gold Investor, Volume 5, March 2014.

Gold is a distinct asset class

We believe in the strategic case for commodities but urge investors to view gold as a distinct asset.

Why gold is often defined as a commodity

Gold is often lumped together with the commodity complex by investors and investment practitioners alike. Whether as a component in a commodity index (S&P Goldman Sachs Commodity Index, Dow Jones UBS Commodity Index), one of the securities in an ETF, or as a future trading on a commodity exchange, gold is viewed as a part of this complex. Before setting out to show how different gold is from its nearest 'commodity' cousins and by extension the rest of the complex, we detail the similarities.

Zooming in to the tradable commodities we are familiar with, gold shares characteristics with other commodities in that it:

Gold shares some similarities with members of the commodity complex; it is a metal, after all...

- **Is extracted**, and shares other commonalities with commodities including scarcity, consumption and fungibility.
- **Forms part of commodity structured products.** Gold is a component of many well known indices, and this inclusion will invariably align some of the price movements of the constituent commodities. These influences include both end-of-year rebalancing where futures are bought/sold to realign commodity weightings in these indices, and the effect of exchange-traded products that track such indices.

Gold undoubtedly shares some similarities with other commodities. But a detailed look at the make-up of supply and demand highlights that the differences outnumber the similarities.

...but the differences outweigh the similarities.

The supply of gold is balanced, deep and broad, helping to quell uncertainty and volatility

A good deal of what makes gold behave differently from other metals and commodities lies in the structure of its supply and demand. These differences all add up to create a fundamental framework that is evidently unique compared to the members of the commodity complex. **Table 1** details the geographic spread of primary production according to where it is mined, rather than refined.⁵

Table 1: Gold production is geographically widely distributed

Geographical distribution of primary supply (mining) of various commodities

	North America	Central and South America	Europe	Eurasia	Middle East	Africa	Asia and Oceania
Aluminium	9.7%	3.8%	8.6%	7.9%	0.0%	3.6%	66.5%
Lead	13.6%	26.5%	15.2%	0.0%	0.0%	3.9%	40.8%
Zinc	9.2%	20.0%	7.8%	0.0%	0.0%	2.5%	60.5%
Copper	13.3%	41.7%	5.1%	5.5%	0.1%	9.4%	24.8%
Nickel	9.1%	8.0%	2.7%	11.3%	0.0%	3.5%	65.5%
Silver	27.9%	29.1%	7.9%	8.6%	0.4%	1.7%	24.3%
Platinum	6.0%	0.0%	0.0%	13.5%	0.0%	80.5%	0.0%
Palladium	15.0%	0.0%	0.0%	41.6%	0.0%	43.4%	0.0%
Gold	15.3%	17.6%	0.8%	13.8%	0.2%	20.0%	32.3%

Reference notes are listed at the end of this article.

Source: Bloomberg, GFMS, Thomson Reuters, World Gold Council

Gold's dispersed production base helps buffer supply shocks much better than other metals.

The prominence of the Asia and Oceania region in the production of base metals, excepting copper, is striking. Nickel's dominant producer is Indonesia, with a 30% share. Although Chinese copper mine production did not exceed 10% in 2013, its share of refined copper production is above 30%. Equally striking is the production concentration of platinum and palladium in Africa and Eurasia (South Africa and Russia dominate with almost 80% of production).

Geographic spread of production is considerably higher for silver, with no region producing more than 30% of annual mine supply, but Mexico is the largest single producer, with 21% of 2013 production.

⁵ While further processing and refining (eg converting bauxite and alumina into aluminium) may take place in different locations, primary production is the cleanest gauge of supply developments because stocks in downstream processing can buffer shocks in primary production.

Gold production concentration stands out as the most balanced. In 2013, the largest producer of gold was China, with 15% of global mine supply. Eighteen countries represent a cumulative 80% of production, while only eight countries reach the same cumulative total in silver production.

Given the propensity for supply disruptions in commodity markets, if stock levels – the supply-chain buffer – are low, supply concentration is likely to have a material impact on price volatility and uncertainty.

The share and geographic spread of secondary supply (recycling) adds balance and liquidity to the market...

Further, most metals also have some secondary or recycled supply added to the supply chain. This also helps to serve as a buffer for disruptions to primary supply as well as a counter to large price rises. In 2013, gold's recycled supply amounted to 30% of total (3-year average 35%). At its peak, recycling's share of supply reached 42% in 2009 in the aftermath of the global financial crisis. The 1997 Asian financial crisis also culminated in a doubling of recycling's share of supply in 1998. A good deal of the recycling that materialises comes from jewellery. This helps to balance the market, buffer volatility and provide liquidity in times of need. By contrast, the platinum group metals (PGM) and silver see recycling reach approximately 20% of supply. The geographic source of this recycling is more concentrated than gold, with most recycling supply sourced from industry in North America, Europe and Asia and Oceania. In contrast, gold sees 30% of this secondary supply from the Middle East, Central and South America, Eurasia and Africa.

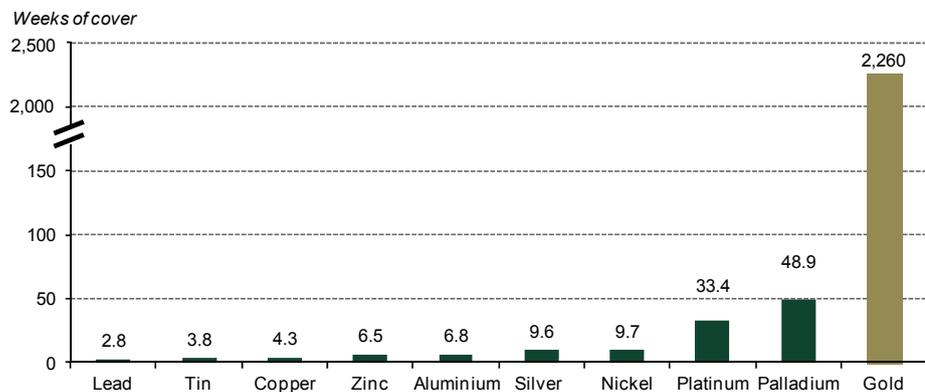
...a feature enhanced by the sizeable stock of above ground gold.

Gold stocks dwarf the stock levels of other metals, because they are not consumed

One of the most remarkable features of the gold market, and one that often confounds investors who try to use it to assess the gold market's imbalance, is the size of the stock of gold. The hypothetical 'cube', measuring approximately over 21meters (67 feet) on each side and containing all the gold ever mined, serves as a potent reminder of how precious gold is (see Focus 1 in *A perspective on gold as a hedge in an expanding financial system*).⁶ However, it also highlights how much gold currently exists above ground, ready to be mobilised should the need arise, and also emphasises the critical difference that gold is held as a store of value, not consumed.⁷

Chart 1 lists the current 'forward cover' of metal stock piles. The lead market currently has 2.8 weeks' worth of supply on hand at the current rate of demand. The base metals numbers and even the PGM figures are in stark contrast to gold stocks, which would cover 2,260 weeks (about 43 years) of demand at current levels. The stock of private investment gold would cover total demand for 8.9 years.

Chart 1: Total above-ground gold stocks could cover 43 years of demand



Nickel stocks are 'visible'. According to Roskill, invisible stocks could amount to 27 weeks. Additional reference notes are listed at the end of this article.

Source: Bloomberg, Roskill Nickel Market Outlook, GFMS, Thomson Reuters, World Gold Council

6 World Gold Council, *A perspective on gold as a hedge in an expanding financial system*, Gold Investor, Volume 5, March 2014.

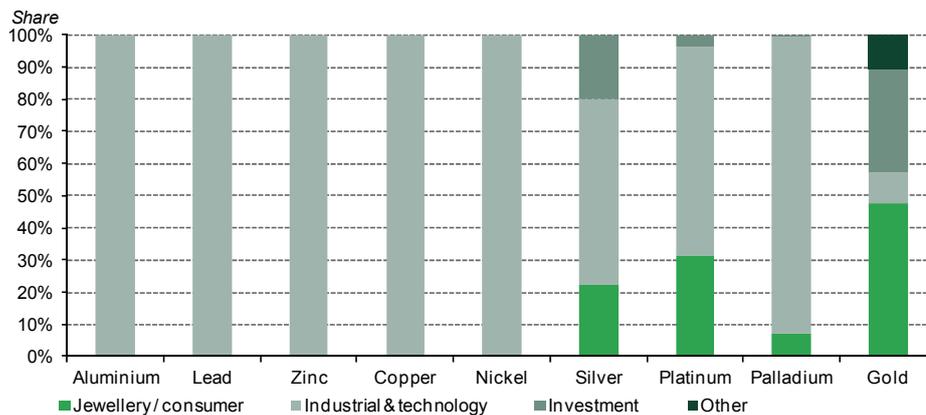
7 With an annual production of 2,900 tonnes, the stock of above-ground gold currently sits at 177,200 tonnes. In other words, mine production adds 1.6% per year to the above ground stock. Even assuming only privately held investment stock of 35,500 tonnes as that readily available as supply, the contribution that extraction makes to total available supply is still relatively miniscule

But it is not just the supply side that makes gold stand out from the rest. Demand sources also have a relatively low concentration...

Gold demand comes from a wide range of segments and regions

Equally important, however is the structure on the demand side. **Chart 2** divides demand into broad types. Here we assume that various sources of industrial and technological demand will 'broadly' be driven by the same macro-economic factors.

Chart 2: Gold enjoys sources of demand that de-link it from the global business cycle



Copper has small proportions in consumer and investment categories but these are negligible. Additional reference notes are listed at the end of this article.

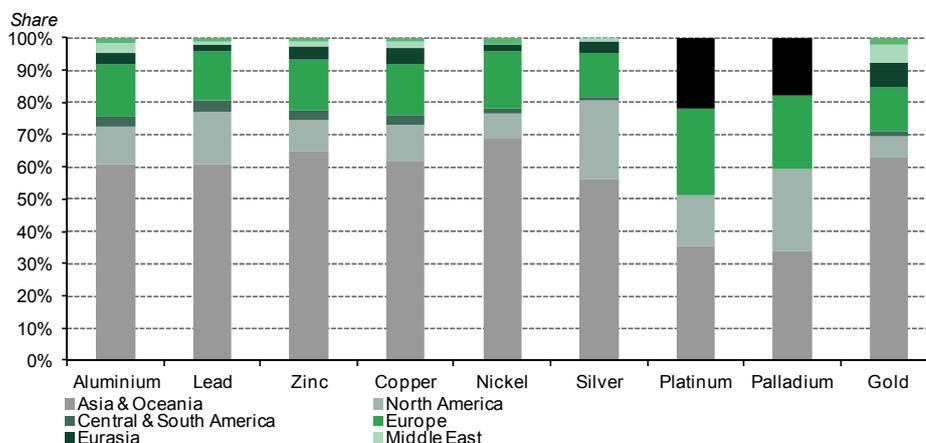
Source: Bloomberg, GFMS, Thomson Reuters, World Gold Council

...whether by category or geography.

Base metals are almost uniformly used within industrial applications. Copper is often referred to as 'Dr Copper' by economic commentators, due to its integral role in sectors of the economy that are good bellwethers of economic growth. Industrial and technological demand is undoubtedly the predominant source of demand for these metals.

Platinum, palladium and silver also feature in the jewellery segment, but none of the precious metals has the geographic spread of demand that gold has, across each segment (**Chart 3**). Gold's demand is certainly more centred in Asia and Oceania than platinum and palladium, but their concentration within the automotive industry mitigates the effects of a reasonably broad geographic spread. In addition, gold demand features more heavily in the regions of Latin America, Eurasia and the Middle East (14.5%) than the other metals.

Chart 3: Although Asia figures prominently in gold demand, categories are well spread



Reference notes are listed at the end of this article.

Source: Barclays, Bloomberg, GFMS, Thomson Reuters, World Gold Council

Gold's physical activity outweighs that of the futures. This is in stark contrast to commodities more generally.

Gold has a lower correlation to the business cycle than other commodities – and a very low correlation to equities.

Gold has lower counterparty risk than other commodities

Finally, while most commodities tend not to be subject to credit risk in the same way that fixed income and equity securities are, they may still be subject to counterparty risk (the risk that the short investor cannot fulfil the contract) especially when accessed via futures markets.

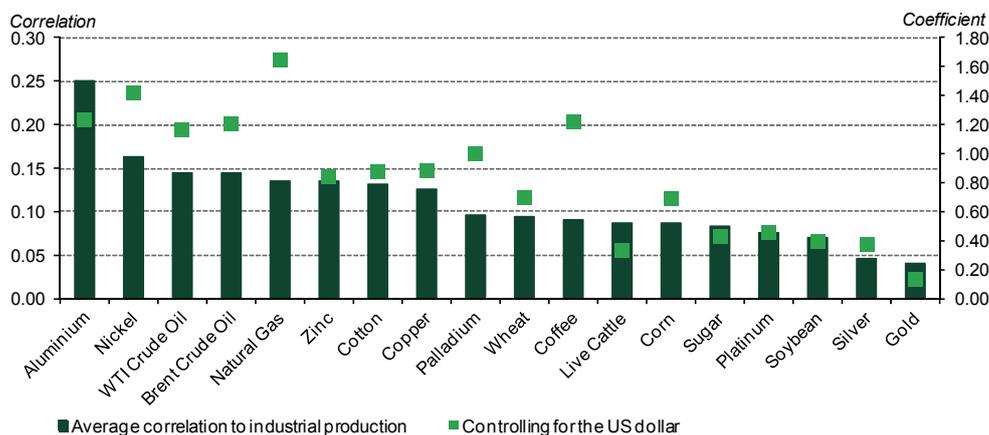
Given that gold is heavily traded on the spot market, investors can minimise counterparty risk by taking delivery of gold, or by keeping gold in allocated accounts or products that are held primarily in allocated accounts (eg, various gold-backed ETFs).

The fundamental make-up of gold is different from that of other commodities. They may share some attributes, but gold's qualities make it behave differently.

Gold has a lower correlation with the global business cycle

As a result of the differences in supply and demand, gold also exhibits different behaviour compared to commodities in general. To assess the relationship each commodity has to the global business cycle (Chart 4), we correlated quarterly changes in commodity prices with changes in industrial production (IP). While this is a basic approach that omits expectations and does not control for idiosyncrasies in economic variables or commodity-price movements, we would correctly expect to see a pattern emerge.

Chart 4: Gold has the lowest correlation to the global business cycle



Reference notes are listed at the end of this article.
Source: Bloomberg, Datastream, World Gold Council

Base metals and energy are more closely related to the global cycle than other commodities as shown by the dark green bars and the left y-axis. Least closely tracked are agricultural commodities, silver and gold – possibly driven by gold's (and silver's) negative relationship to the dollar. After all, higher growth should coincide with higher interest rates and consequently a stronger currency.

Accounting for changes in the broad US dollar index still leaves gold as the least sensitive commodity to changes in global industrial production (light green squares and right y-axis). A further examination substituting real GDP growth for IP growth raises gold's sensitivity ranking somewhat. But this is intuitive, as the income effect (a driver of gold demand) is much more reflected in a broad measure like GDP than a concentrated manufacturing-related factor such as IP.

This lower cyclical sensitivity in gold's price behaviour is a factor that separates it from other commodities, including the other precious metals. This also makes gold a better diversification asset for equities, as equities also correlate well with industrial production (correlation of 0.56 using year-on-year changes of global IP and MSCI world equities).

Gold behaves more like a currency than a commodity

Gold satisfies key characteristics that define a currency.

While gold is considered a commodity by many, its currency attributes stand out. Its track record as a part of the economic architecture and backer of currencies is unparalleled. It remains the third largest reserve asset, after the US dollar and the euro, accounting for c.13% of global reserves.

It also satisfies the characteristics that define a currency, including:

- **A unit of account.** Gold is traded 24/7 globally, and is one of the most convertible assets to local cash.
 - **A store of value.** It is virtually indestructible and has constrained supply not dominated by a single entity.
 - **A medium of exchange.** While gold does not serve as an official currency, it has served as a medium of exchange throughout history. It is used in transactions from houses to chickens and has gained interest as an alternative currency in countries such as Switzerland and Mexico.⁸
- Component of foreign reserves.** Central banks hold gold; indeed, the Bank for International Settlements (BIS) stated in its 2013 annual report that 'gold is to be dealt with as a foreign exchange position rather than a commodity because its volatility (which is almost consistently lower than commodities) is more in line with foreign currencies, and banks manage it in a similar manner to foreign currencies'.

In *Gold and currencies: the evolving relationship with the US dollar*,⁹ we looked at the relationship between gold and the US dollar and described how gold is influenced by three currency-related themes: the value of the US dollar vis-à-vis other currencies, global money supply and gold's role in foreign reserves.

If these are themes that influence gold, and gold behaves differently from the commodities complex, one would expect to see a difference in the relationship between the price of a given commodity and measures of these characteristics.

Gold shows a stronger relationship to currency-related variables.

Chart 5 and **Chart 6** show precisely this difference. Gold has a stronger correlation to year-on-year changes in global broad money supply than the other commodities. Gold is the only commodity that has a positive correlation to excess money supply,¹⁰ a marker of potential inflation and currency debasement. And gold has the strongest negative relationship to the US dollar (see footnote 7).

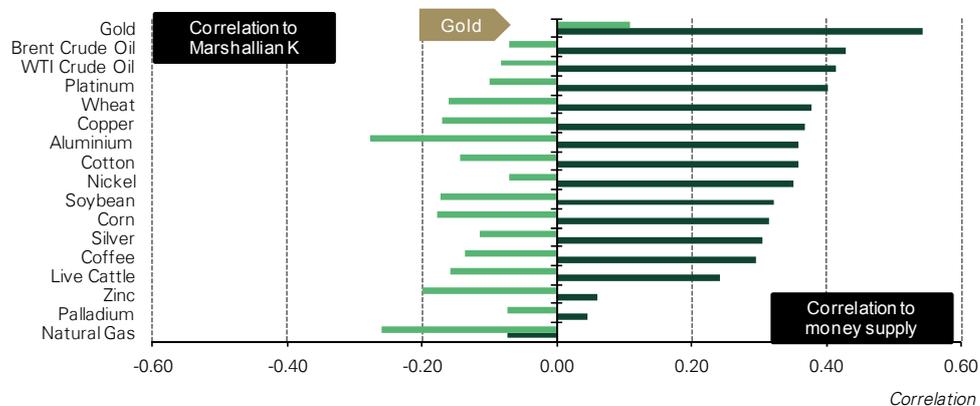
Finally, gold has the strongest relationship to global foreign-exchange (FX) reserves. This is partly a function of efforts by central banks to maintain a constant ratio of gold to growing reserves, and it is also partly due to gold's reaction to the growing influence of emerging markets whose reserve building has been concurrent with wealth creation and the increased desire for gold.

⁸ World Gold Council, *Gold and currencies: the evolving relationship with the US dollar*, Gold Investor, Volume 4, October 2013.

⁹ Ibid.

¹⁰ Nominal money supply growth less nominal GDP growth.

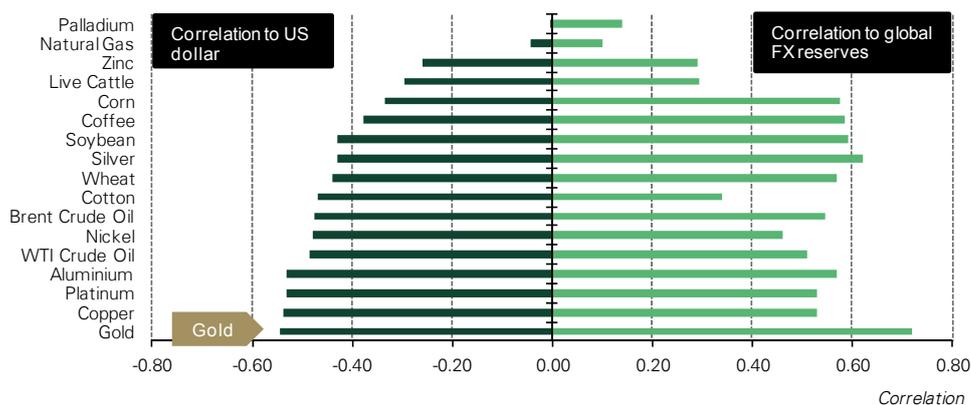
Chart 5: Gold correlates to money supply and excess money supply better than other commodities



Marshallian K is defined as growth in broad money less nominal GDP. Additional reference notes are listed at the end of this article.

Source: Thomson Reuters Datastream, World Gold Council

Chart 6: Gold correlates less to the dollar and more to global FX reserves than other commodities



Reference notes are listed at the end of this article.

Source: Bloomberg, IMF, World Gold Council

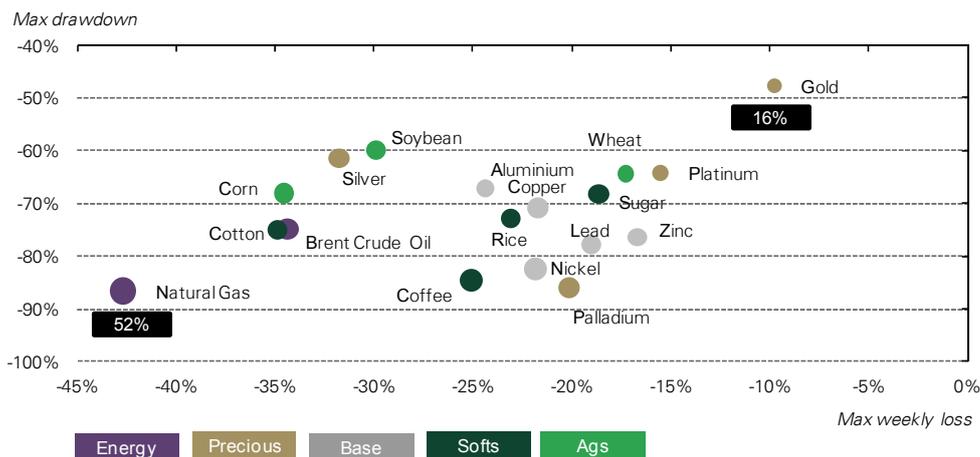
Gold's traded volumes exceed those of other commodities and are comparable to those of major currency pairs.

Furthermore, gold is a highly liquid asset. Daily traded volumes are comparable to major currency pairs, trailing only the euro, yen and sterling to dollar crosses. Its daily volume on futures and over-the-counter (OTC) exchanges ranks among the highest in the commodities complex. This makes intuitive sense because gold is not consumed like most other commodities, so it can change hands several times over a period. And it can be accessed across several exchanges globally via OTC physical bars, exchange-traded funds and futures. Or even as 22-carat jewellery – an effective investment tool in many parts of the world. No commodity can boast such ready access.

Gold's fundamentals influence its price behaviour and help make it an invaluable portfolio asset.

Gold behaves differently from other commodities because it is designed, employed and enjoyed differently. The breadth and depth of supply make gold less susceptible to shocks from a single source. Its diverse demand drivers render it less prone to cyclical, whether business or sentiment driven. For every negative gold investor there is more likely to be a positive technology or jewellery buyer, and vice versa. These crosswinds help to stabilise gold and reduce its volatility. **Chart 7** shows that gold, compared to other commodities, is both far less volatile (shown as percentages in black boxes and relative size of bubbles) and far less prone to sudden draw-downs (weekly losses), despite having experienced, along with commodities, a longer bear market.

Chart 7: Gold is far less volatile than the commodity complex constituents



Reference notes are listed at the end of this article.

Source: Bloomberg, World Gold Council

Gold's portfolio benefits set it apart from other commodities

Gold deserves a unique place in a portfolio – further enhancing risk-adjusted returns in portfolios with an existing commodity allocation.

Armed with the information set out above, how can investors benefit from gold's unique attributes? We maintain that commodities, despite their volatility, should form part of a prudent asset allocation strategy. But many investors might view gold as simply part of the commodity complex and invest in one of the broader commodity indices. This we have shown is suboptimal from a risk-return perspective.

Gold's unique attributes set it apart from the commodity complex in that it deserves a separate allocation. It should be viewed as a hybrid of commodities and currencies rather than being firmly entrenched in either camp.

In the paper *Gold: a commodity like no other*,¹¹ we showed that gold can enhance a portfolio that already has exposure to commodities via a broad index (S&P Goldman Sachs Energy Light Index or GSEL). The results are reproduced in **Table 2**. Using long-term strategic returns, 20-year volatilities and correlations, an allocation to gold was shown to be beneficial right across the risk spectrum, even with an existing commodity allocation.

Overall, the addition of gold increased risk-adjusted portfolio returns and reduced portfolio Value-at-Risk (VaR), or the probability of large portfolio losses.

Table 2: Performance of assets and portfolios containing various allocations to gold¹

	Gold (US\$/oz)	MSCI US Index	MSCI ex US Index	BarCap US Agg Index	JPM 3M T-bill Index	S&P GSEL	Portfolio ²		
							0% gold	5% gold	10% gold
Return	6.8%	7.1%	4.1%	6.9%	4.3%	3.2%	6.0%	6.1%	6.3%
Volatility	15.6%	17.2%	17.8%	3.9%	0.3%	15.3%	8.9%	8.6%	8.5%
Eff. Ratio	0.43	0.41	0.23	1.74	13.23	0.21	0.67	0.71	0.74
5% VaR	3.39%	3.74%	3.53%	0.85%	0.01%	3.09%	1.67%	1.65%	1.67%

1) Calculations are based on weekly total returns and converted to annualised return and volatility when applicable

2) Portfolio using a 30% allocation to US equities, 20% to international equities, 39% to fixed income, 1% to cash and various allocations to gold and commodity indices. A 0% gold is equivalent to a 10% on the S&P GSEL; 5% on gold implies 5% on S&P GSEL; and a 10% gold weight implies a 0% allocation to S&P GSEL.

Source: Barclays, JP Morgan, MSCI, Standard and Poor's, World Gold Council

11 World Gold Council, *Gold: a commodity like no other*, October 2010.

References

Table 1: Gold production is geographically widely distributed

All values calculated as 3-year averages. Regions have been constructed from country-level data to ensure consistency among constituents. Major country designations: Turkey=Eurasia, Russia=Eurasia, Iran=Middle East, All former CIS countries = Eurasia, Mexico = North America.

Chart 1: Total above-ground gold stocks could cover 43 years of demand

Stocks calculated as of 2013. As not a flow variable, a single year is deemed representative. Forward weekly cover calculated as available above-ground stocks / weekly demand. Data sourced from Barclays, Bloomberg (Industries), Roskill Nickel Market Outlook 2014, GFMS, Thomson Reuters

Chart 2: Distribution of demand by category

All values calculated as 3-year averages. Although small amounts of copper will be reflected in both consumer demand (ornamental / functional) and investment (ETFs), these amounts are negligible and unlikely to have any effect on prices at current levels of flow.

Regions have been constructed from country-level data to ensure consistency among constituents. Major country designations: Turkey=Eurasia, Russia=Eurasia, Iran=Middle East, All former CIS countries = Eurasia, Mexico = North America.

Chart 3: Distribution of demand by geography

All values calculated as 3-year averages. Regions have been constructed from country-level data to ensure consistency among constituents. Major country designations: Turkey=Eurasia, Russia=Eurasia, Iran=Middle East, All former CIS countries = Eurasia, Mexico = North America

Chart 4: Sensitivity to the global business cycle

The chart shows the unweighted average correlation of commodities prices to industrial production (IP) in the G20 countries. Please note that the EU is represented by Germany, France, UK, and Italy. We exclude Saudi Arabia due to data availability. Correlation run on QoQ changes in variables. The results were robust to changes in year-on-year changes in IP growth, and to a GDP weighted average of global IP. The unweighted average was used to capture emerging market growth better. To control for changes in the dollar index, a simple OLS on changes in variables was run as per above, with commodity prices as the dependent variables, IP growth and changes in a broad trade-weighted dollar index as the independent variables. The coefficients were then averaged as per the correlations above. Results were robust to the weighted average. The same procedure was repeated for GDP growth. Seasonally adjusted indexes were used where available. Quarterly data spanning Q4 1990 to Q1 2014 was used across all series.

Chart 5: Correlation to global broad money supply growth and excess money supply growth

Data spans Q1 1995 to Q1 2014, quarterly frequency. Correlation of year-on-year percentage changes in commodity prices with year-on-year growth in global broad money supply and global excess money supply (Broad Money supply growth less Nominal GDP growth). Global aggregate comprises US dollar value of broadest available measure of money supply in the US, UK, China, Japan, Switzerland, Russia, India, Brazil, Germany and France (contribution to Euro Area money supply respectively).

Chart 6: Correlation to the US dollar and global FX reserves growth

Data spans Q1 1995 to Q1 2014, quarterly frequency. Correlation of year-on-year % changes in commodity prices with year-on-year percentage change in broad US dollar trade-weighted index and global FX reserves (IMF composite from Q1 1999, aggregated total from Q4 1990).

Chart 7: Gold is far less volatile than the commodity complex constituents

Based on weekly log returns. Data spans Dec 1987 to May 2014 except for Natural Gas, (Apr 1990) and Zinc (Jan 1989). Base metals prices are LME 3-month futures, all others US-listed futures except precious metals which are spot prices in US\$/oz.

III: The most liquid of all ‘liquid alts’

Many investors will be familiar with alternative assets’ growth over the past decade. More recently so-called ‘liquid alts’ are on the rise. These assets – likely to stand at US\$1.3 trillion by 2017 – give investors a more liquid, transparent way to access hedge fund, private equity, commodity and real estate strategies.

However, some liquid alts come with drawbacks. These include limits to their true liquidity, relatively short track-records, inherent drags on performance, and – for some – relatively high fees.

Our analysis shows that gold meets – and beats – the criteria that characterise liquid alts but at a lower cost to investors and with fewer of those drawbacks.

Post-crisis diversification, alternative assets and the growth of liquid alts

The 2008-2009 financial crisis refocused attention on risk management and liquidity...

Over the past decade, many investors have looked to alternative assets – anything that is not a stock, bond or money market instrument – to diversify risks away from those traditional assets and deliver efficient risk-adjusted returns. The result has been a large flow of funds to alternative assets. Hedge funds, private equity, real estate and commodities now account for 5% of global assets under management – with an additional 1% in gold (see *How gold improves alternative-asset performance* for more detail).

However, the 2008-2009 financial crisis forced investors to rethink how much diversification alternatives really brought. Because assets like hedge funds or private equity funds tend to be illiquid, investors faced tough choices: withdraw their assets (if this was even an option) and face steep penalties, or use other resources to pay for liabilities while waiting for an exit under better conditions – hoping that, in the mean time, the funds they invested in would survive.

...and liquid alternatives have filled this demand...

In response, interest has grown for lower-fee, transparent, publically-offered products. Enter liquid alternatives or ‘liquid alts’: alternative-based assets that are offered as liquid investments. Their key characteristics:

- Strategies that go beyond long-only investing in equities or debt instruments
- Higher liquidity than other alternatives through daily pricing and daily subscription/redemption mechanisms
- Transparency via periodic and regulated disclosures.

...driven further by regulatory changes and evolving market dynamics.

Market trends have boosted liquid alts

While liquid alternatives have existed for several decades there has been a surge in product creation and demand in the post-financial crisis marketplace. Three major market-trends have driven this surge:

- An increased flow into active equity funds that spurred demand for a way to manage directional equity risks
- The end of a 30-year credit bull market that forced investors to seek yield from non-traditional sources
- Investors' concerns about future liquidity crises.

Today, liquid alts are seen as a way to get the benefits – often summarised as diversification and risk-adjusted returns – of ‘traditional’ alternative assets without the lack-of-liquidity drawbacks.

Regulatory changes and advisor-compensation models underpin demand

In addition, recent regulatory and advisor-compensation shifts, sparked by the global financial crisis, have added supply and demand for liquid alts.

Regulations on the back of the Dodd-Frank Act have resulted in making mutual fund and ETF structures more attractive for alternative strategies.¹ These regulations require private funds to have levels of transparency that are closer to those of public funds. Similar regulatory rules and pressures in the European Union are likely to boost investment in liquid-alt assets.²

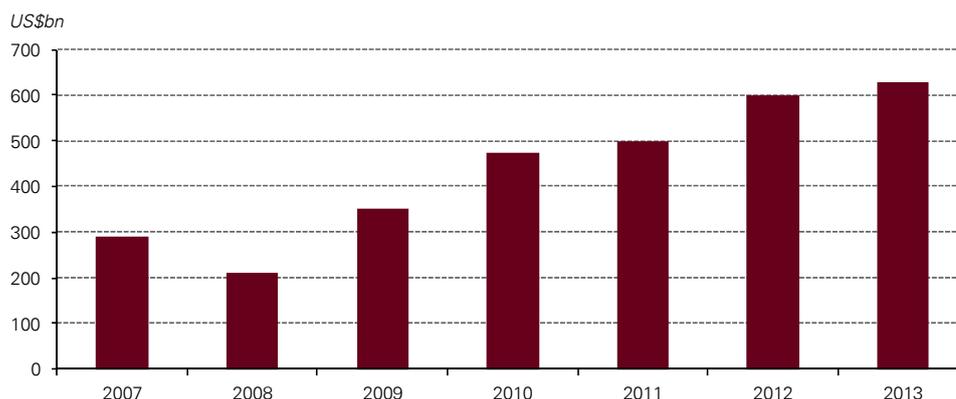
The recent shift in advisor compensation models towards a combined fee-and-commission structure has also added to demand for liquid alts. This incentivises advisors to use volatility-reducing strategies to keep their asset base – and the fees collected on it – as stable as possible.³

Global demand for liquid-alts could reach US\$1.3 trillion by 2017

As we see it, the outlook for liquid alts looks positive (**Chart 1**). There is growing, global interest and an increasing number of qualified investors. According to a 2012 Cogent Research survey, almost 75% of US financial advisors used some form of alternative assets, and they have increased their usage in recent years.⁴

A recent Citigroup study suggests overall demand for liquid alts will reach US\$1.3 trillion by 2017; a level equal to total assets invested in all hedge funds in 2008.⁵ They expect that US demand from retail and institutional sources will push assets in liquid-alt vehicles to US\$908 billion, and new demand for liquid UCITS⁶-structured products in Europe is expected to reach US\$417 billion. Similar figures are estimated by Barclays, which sees demand ranging from US\$650 to US\$950 billion in US alternative mutual funds alone by 2018.⁷

Chart 1: Global liquid-alternative assets have grown substantially since 2008



Reference notes are listed at the end of this article.

Source: Morningstar, Citi Prime Finance, World Gold Council

1 Securities and Exchange Commission, <http://www.sec.gov/spotlight/dodd-frank/hedgefundadvisers.shtml>.

2 Citi Prime Finance, *The rise of liquid alternatives and the changing dynamics of alternative product manufacturing and distribution*, May 2013. European Commission, *Economic review of the financial regulation agenda: Frequently asked questions*, May 2014.

3 Citi Prime Finance, *Op Cit*, May 2013.

4 SEI, *The retail alternatives phenomenon*, May 2013; Financial Advisor, *Ready or not, alternative investments are going mainstream*, December 2012.

5 Citi Prime Finance, *The rise of liquid alternatives and the changing dynamics of alternative product manufacturing and distribution*, May 2013

6 The Undertakings for Collective Investment in Transferable Securities (UCITS) are a set of European Union Directives (2001/107/EC and 2001/108/EC) with the objective to allow free operation of collective investment structures throughout the EU.

7 Barclays Prime Services, *Going Mainstream: Developments and Opportunities for Hedge Fund Managers in the '40 Act Space*, April 2014.

Liquid-alts versus traditional alternative-assets

Due to their diversity, the categorisation of the liquid alts universe tends to be different across firms and industry participants. For this paper, we rely on a framework constructed by Money Management Institute in conjunction with Dover Financial Research.⁸ It utilises 22 Morningstar asset categories and subdivides them in two broad types of liquid alternative strategies, namely: hedges and commodities.⁹

Liquid alts have several advantages over their traditional counterparts...

Liquid alternatives, as a subset of the alternative-asset universe, have various common characteristics. For example, they both 1) are seen as a source of diversification; 2) may use leverage to magnify performance and enhance return efficiency; and 3) may use derivatives-based strategies to access non-traditional markets, hedge risk, or help speculative positioning. However, liquid alts are different from traditional alternative assets in several ways.

In this section we will look at the advantages and disadvantages of liquid-alts compared to traditional alternative assets.

Advantages of liquid alts

- **Liquidity:** Most offer daily pricing that would be highly unusual in traditional hedge funds or private-equity funds. In general, liquid-alt funds must meet daily investor redemption requests and publish daily net asset values (NAVs). In contrast, traditional hedge funds, private equity, and direct real estate investments often inhibit redemptions through gate and lock-up mechanisms and offer less frequent valuations.
- **Transparency:** Liquid alts are more transparent because they have set investment mandates. These require them to clearly outline the intended investment strategy and, if applicable, state a benchmark for performance comparison. Changes require shareholder approval. Traditional alternatives can be more opportunistic and change their strategy as they see fit – often without shareholder approval. Liquid-alt funds must also file regular portfolio holdings and produce standard public documents (eg, annual reports, prospectuses, statements of additional information).
- **Lower fees:** Liquid alts offer investors lower total investment costs compared to many alternatives whose differentiated strategies and strong performance come at a high price. This can be the risk premium associated with illiquidity in private equity investments, hedge funds' performance fees, or the extra research costs of direct real estate investments. Liquid alts give investors a way to invest in non-traditional assets at a lower initial cost. They are available to non-accredited investors, require a low minimum investment, and their conventional investment structure usually creates an efficient tax structure and reduces initial costs.

Disadvantages of liquid alts

- **Short track records.** Liquid-alt funds usually have shorter track records than traditional alternative-asset funds. This makes it harder for investors to analyse and evaluate investments, and increases pre-investment research costs.
- **Performance drag.** Liquid-alt funds tend to keep cash on hand to meet investors' redemption requests, and this can create a drag on performance. There also appears to be a structural liquidity discount across liquid alts: a study by Cliffwater found an average annual discount of 100bps in their performance relative to non-liquid alternatives.¹⁰ They found that it was persistent across time but inversely related in times of market stress (markets tend to value liquidity more highly during a crisis).

...but there are still some disadvantages...

⁸ Money Management Institute, *Industry Guide 2012-2013*.

⁹ Hedges include the following Morningstar categories: currencies, long/short equity, multi-alternative, equity precious metals, managed futures, market neutral, volatility, trading-leveraged commodities, trading-inverse commodities, trading-leveraged debt, trading-inverse debt, trading-leveraged equity, trading-inverse equity, trading-miscellaneous strategies, and non-traditional bonds. Commodities, as their name implies, are consist of the following Morningstar commodities categories: agriculture, broad basket, energy, industrial metals, miscellaneous and precious metals. See reference in footnote 8.

¹⁰ Cliffwater LLC, *Performance of Private versus Liquid Alternatives: How Big a Difference?* June 2013.

...and liquid alts still have limitations for investors.

Liquid alternatives still have limitations

While liquid alts overcome some of the constraints of traditional alternatives, they still have limitations:

- **Limited liquidity.** There can be limits to the liquidity of liquid-alts. Some markets (eg, particular credit and derivative markets) that liquid-alt funds access can be less liquid than basic equity and bond markets. In times of stress this could mean that underlying positions have to be sold at a discount.
- **Limited transparency.** Transparency is limited between reporting periods, and some funds do not specify a performance benchmark. This could create risk-management problems for investors who want to understand their risk position on a more frequent basis.
- **Limited capacity.** Liquid-alts can also suffer from limited capacity: a liquid-alt manager may not want to take on new capital because a larger fund would not be able to implement a particular strategy.
- **Wide range of fees.** Liquid alternatives have lower fee structures, but there still is a wide range of fee levels across the asset class. According to Morningstar data, an average net-expense ratio for US mutual fund liquid-alts is 1.9% but can go as high as 4.6% – compared to annual fees of less than 1% common in many traditional mutual funds and ETFs.¹¹

Gold is a liquid alt with fewer drawbacks and more portfolio benefits

Gold meets the main criteria of a liquid-alt asset: it is an alternative to investing in stocks, bonds and money market instruments, it is highly liquid and it is transparent. It also provides effective diversification.

Further, as we discuss in *How gold improves alternative-asset performance* and *Gold: metal by design, currency by nature*, it enhances investment strategies. While it is considered a commodity by some, in essence it is a useful hedge that shares characteristics with currencies.

Importantly, gold shares several of the advantages that attract investors to liquid alternatives, but it does not share the same limitations. Gold can even expand on some of the advantages, in our view, making it a liquid alt that is in a class of its own.

Gold does not correlate to stocks in a market crisis

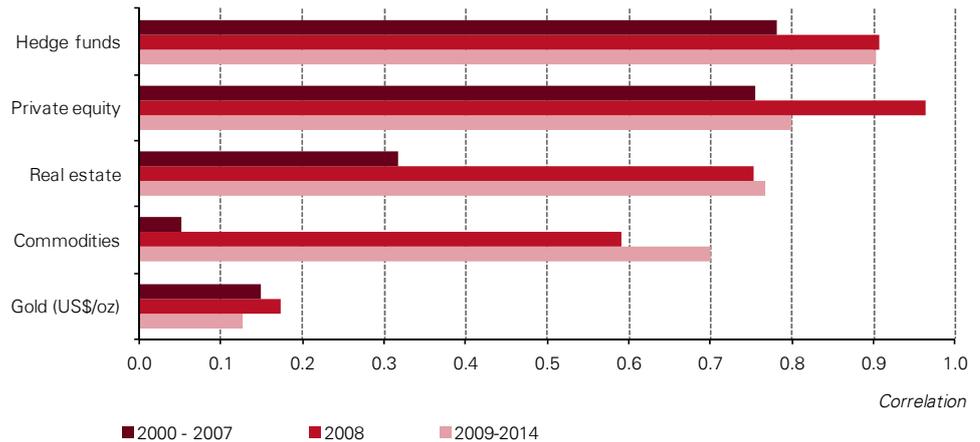
After 2008, investors have focused on diversification as never before. This has been a key driver for the growth in all alternative assets. But during a market crisis – when diversification really matters – most alternative assets actually increase their correlation to the stock market. Gold is the sole exception.

¹¹ The Wall Street Journal, *Alternative mutual funds draw concerns*, May 2014.

Many hedge funds, private equity funds, real estate-based investments (the catalyst of the 2008-2009 financial crisis), and commodity-based investments experienced steep increases in correlation during the 2008 crisis (**Chart 2**) and have not dropped to pre-crisis correlation levels. As the chart shows, gold's correlation with stocks – typically low in normal market conditions – is the only asset whose correlation has fallen below pre-crisis levels.

Chart 2: Most assets' correlation to global equities spiked in 2008 and has remained elevated; only gold has dropped below pre-crisis levels

Correlations to equities based on monthly returns (quarterly for private equity due to data availability) between Jan 2000 – Dec 2007, Jan 2008 – Dec 2008, Jan 2009 – Apr 2014



Reference notes are listed at the end of this article.

Source: Bloomberg, Cambridge Associates, Dow Jones, HFR, The London Gold Market Fixing Ltd, World Gold Council

Gold is one of the most liquid assets in global markets

When it comes to liquidity – a key characteristic of liquid alts – **Chart 3** shows that gold is well placed. The gold market is very deep and very liquid:

- **Average daily gold volumes are significant.** Gold daily volumes have historically only been surpassed by three major currency pairs (involving the US dollar) and two other financial assets: US treasuries and Japanese government bonds.
- **The gold market is deep.** It can be accessed by investors big and small. The above-ground gold stock in the form of bars and coins accounts for one fifth of stocks, worth approximately US\$1.5 trillion.¹² In addition, the notional amount in gold derivatives (over-the-counter and exchange-traded contracts) is estimated at US\$740 billion.¹³ This has allowed investors to buy and sell in periods of crisis without apparent price distortions.
- **Gold prices are available 24/7.** Gold is traded intraday worldwide. This allows continuous pricing through products such as physical bullion exchanges, exchange-traded products and over-the-counter (OTC) contracts. A robust spot and forward market along with a large and active swap market further augments available liquidity and allows investors to lend and borrow gold. In addition, gold-backed ETFs have given a wide range of investors a way to invest in gold.¹⁴

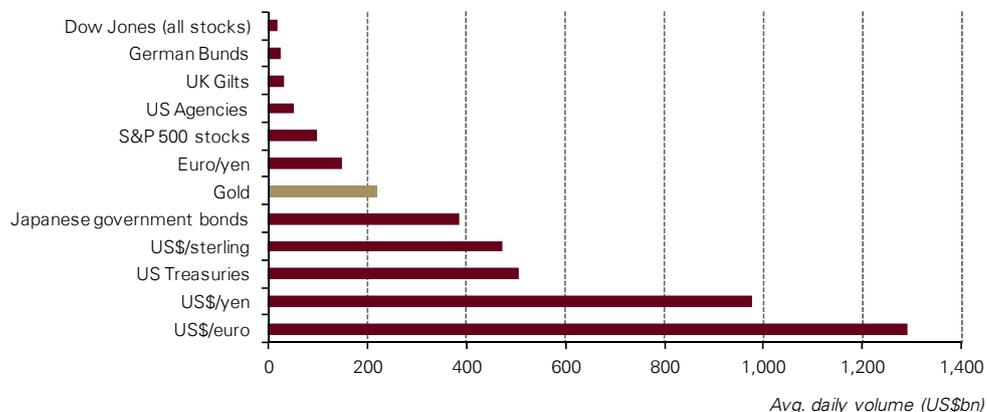
¹² Bars and coins in the hands of investors, including gold backed ETFs but excluding central bank gold reserves. Value based on an estimated 35,500 tonnes held in bars and coins (including gold-backed ETFs) at the end of 2013 and the average Q1 2014 gold price of US\$1,288.50/oz.

¹³ Based on estimates by the Bank for International Settlements and data compiled by the World Federation of Exchanges.

¹⁴ Gold-backed ETFs are transparent, regulated, liquid instruments. A large portion of them (including GLD) are backed by physical gold and do not contain derivative contracts.

Chart 3: Gold is one of the most liquid of all assets

Average daily volume in US\$ billions for various assets and currency pairs



Reference notes are listed at the end of this article.

Source: German Finance Agency, Japanese MOF, SIFMA, CPM Group, UK DMO, LBMA, World Gold Council

Gold does not suffer from other disadvantages of liquid-alts

Earlier in this article we outlined other disadvantages and limitations that liquid-alts have, whether in general or compared to other alternative assets. In addition to gold's high liquidity, we note that it does not suffer from the many of their disadvantages:

- **Extensive capacity.** Gold's deep and liquid global market means that investors do not face the capacity issues that can arise with other liquid-alts.
- **Transparency.** Lack of transparency between reporting periods is not an issue for gold. An investment in gold bullion and many of the currently available gold-backed ETFs is solely that. In contrast, the underlying assets in many liquid alts may be less apparent or readily available to investors.
- **A long track record.** There are no concerns around limited track records for gold. The benefits of adding gold to an investment portfolio have been studied and reported extensively, and gold has been freely traded since the 1970s.
- **Low cost.** As has been noted in our previous article *Hedging EM risks? Think gold*,¹⁵ investments in gold can be relatively inexpensive to implement. Investors can store physical bullion and coins, or invest in exchange-traded products or OTC products such as futures and options. For example, the cost of vaulting allocated physical gold or owning gold through an ETF is typically less than 50 basis points per year. Compared to the average cost of other mutual fund liquid alts (190bps), gold can achieve the same desired investment characteristics at a fraction of the cost.¹⁶

References

Chart 1: Global liquid-alternative assets have grown substantially since 2008

Asset values for years 2007 through 2011 were based on data from Citi Prime Finance. For the years of 2012 and 2013, asset values were determined from Morningstar's Global Flows report. The Alternative and Commodities asset classes were aggregated to represent the net assets for liquid alternatives globally.

Chart 2: Most assets' correlation to global equities spiked in 2008 and has remained elevated; only gold has dropped below pre-crisis levels

Correlations of global equities and other assets based on monthly returns (quarterly for private equity due to data availability) between Jan 2000–Dec 2007, Jan 2008–Dec 2008, Jan 2009–Apr 2014. Global equities represented by the MSCI All Country Index. HFRI used as a proxy for hedge funds. Cambridge Associate index represents private equity. US REITs stand for real estate, Dow Jones UBS Commodity Total Return Index for commodities, and London PM fix for gold. All returns based in US dollars.

Chart 3: Gold is one of the most liquid of all assets

Foreign exchange liquidity is based on statistics by the Bank for International Settlements. Government bond liquidity is based on statistics published by country's respective debt offices. Daily trading value of gold is based on the loco London survey conducted by the London Bullion Market Association and the Bank of England in Q1 2011 for the OTC market, as well as daily volume from futures and ETF markets. OTC gold volumes make up more than 80% of daily gold liquidity.

¹⁵ World Gold Council, *Hedging EM risks? Think gold*, Gold Investor, Volume 5, March 2014.

¹⁶ WSJ, <http://online.wsj.com/news/articles/SB10001424052702304178104579535502756404002>.

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